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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,086	02/23/2004	Tao-Yang Han	4416-20	3513

23117 7590 09/19/2007

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
2628	
MAIL DATE	**DELIVERY MODE**
09/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/783,086	HAN ET AL.	
	Examiner	Art Unit	
	Edward T. La Barr	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-52 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-52 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 23 February 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 2/23/2004; 6/8/2004.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Priority

No claim for foreign or domestic priority has been received.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 2/23/2004 and 6/8/2004 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16, 18-42, and 44-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Haller et al. (US Pub. No. 2002/0107673).

Regarding Claim 1:

Haller et al. disclose:

A computer program product which provides a visual depiction of a three dimensional object upon a display device, the program comprising computer readable coded instructions stored in a memory, the computer readable coded instructions being executable on a processor to which information is input via a user input device, (See e.g. paragraphs [0036] and [0085]) wherein when executed the computer program:

detects insertion of a movant solid shape into a context including a target solid shape (See e.g. paragraph [0081]); and

configures the movant solid shape as having a particular attribute in accordance with an attribute of the target solid shape (See e.g. paragraph [0081]).

Regarding Claim 2:

Haller et al. disclose:

The computer program product of claim 1, wherein the program configures representative data of the movant solid shape as having a particular attribute in accordance with an attribute of the target solid shape (See e.g. paragraph [0081] where "...configuration in the part family..." is an "attribute" and See e.g. paragraph [0043] where "representative data" is a "descriptor attribute").

Regarding Claim 3:

Haller et al. disclose:

The computer program product of claim 1, wherein the program configures the movant solid shape as having a particular size or dimension for compatibility with the target solid shape (See e.g. paragraph [0044] "The automated connection mechanism is driven by descriptors." e.g. "...parts are selected ... by matching ... attributes from feature ... with attributes of ... parts" e.g. paragraph [0051] "...mechanism reviews a list of valid lengths ... determines which length would provide the best fit...")

Regarding Claim 4:

Haller et al. disclose:

The computer program product of claim 1, wherein the program configures the movant solid shape as having a particular position relative to the target solid shape (See e.g. paragraph [0081] "...positioning procedure..." See also e.g. paragraph [0007] "...automatically position (i.e. locate ...) a part with respect to a feature.")

Regarding Claim 5:

Haller et al. disclose:

The computer program product of claim 1, wherein the program configures the movant solid shape as having a particular physical orientation relative to the target solid shape (See e.g. paragraph [0081] "...align the part..." See also e.g. paragraph [0007] "...automatically position (i.e. ... align) a part with respect to a feature.")

Regarding Claim 6:

Haller et al. disclose:

A computer program product which provides a visual depiction of a three dimensional object upon a display device, the program comprising computer readable coded instructions

stored in a memory, the computer readable coded instructions being executable on a processor to which information is input via a user input device (See e.g. paragraphs [0036] and [0085]), wherein when executed the computer program:

detects insertion of a movant solid shape into a context including a target solid shape (See e.g. paragraph [0081];) and

configures the movant solid shape as having a particular attribute in accordance with a predetermined rule (See e.g. paragraph [0081], See also paragraph [0086] "...alternatively, this relationship may be predetermined..." See also paragraph [0017] "...automatically generating a part or other model component ... model is retrieved based on compatibility ...")

Regarding Claim 7:

Haller et al. disclose:

The computer program product of claim 6, wherein the computer program configures representative data of the movant solid shape as having a particular attribute in accordance with a predetermined rule (See e.g. paragraph [0081] where "...configuration in the part family..." is an "attribute" and See e.g. paragraph [0043] where "representative data" is a "descriptor attribute.")

Regarding Claim 8:

Haller et al. disclose:

The computer program product of claim 6, wherein the predetermined rule is used to configure the movant solid shape as a particular member of a class of solid shapes represented by a generic solid shape (See e.g. paragraph [0044] "...descriptor is later used to find and retrieve a standard part." where retrieval of a standard part is configuring the movant solid shape as a

particular member (i.e. standard part) of a class of solid shapes.)

Regarding Claim 9:

Haller et al. disclose:

The computer program product of claim 6, wherein the program uses the predetermined rule to configure the movant solid shape as a preferred procurement item (See e.g. paragraph [0004] where a preferred procurement item is "existing inventory" or includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 10:

Haller et al. disclose:

The computer program product of claim 9, wherein the program uses the predetermined rule to configure the movant solid shape as a preferred procurement item supplied by a preferred vendor (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 11:

Haller et al. disclose:

The computer program product of claim 9, wherein the program uses the predetermined rule to configure the movant solid shape as a preferred procurement item in accordance with inventory or availability (See e.g. paragraph [0004] where a preferred procurement item is "existing inventory.")

Regarding Claim 12:

Haller et al. disclose:

A computer program product which provides a visual depiction of a three dimensional object upon a display device, the program comprising computer readable coded instructions stored in a memory, the computer readable coded instructions being executable on a processor to which information is input via a user input device (See e.g. paragraphs [0036] and [0085],) wherein when executed the computer program:

allocates a connector object for each of plural solid shapes, each connector object being conceptually associated with a physical location on the respective solid shape, the connector object including configuration information pertaining to how its solid shape is to be configured relative to another solid shape (See e.g. paragraph [0043] where "connector object" is a descriptor attribute;)

determines an affinity of a connector object of a movant solid shape and a connector object of a target solid shape (See e.g. paragraph [0081] "... mechanism determines ... best fit ...;")

in positioning and displaying the movant solid shape and the target solid shape relative to one another, configures one of the movant solid shape and the target solid shape in accordance with the configuration information of at least one of the respective connector objects (See e.g. paragraph [0081] "...determines which configuration in the part family is the best fit for the feature..." and See e.g. paragraph [0086] "In some parametric implementations, a design engineer may determine whether a feature or a part controls the parametric relationship between the two, alternatively this relationship may be predetermined.")

Regarding Claim 13:

Haller et al. disclose:

The computer program product of claim 12, wherein the program configures representative data of one of the movant solid shape and the target solid shape in accordance with the configuration information (See e.g. paragraph [0081] "...determines which configuration in the part family is the best fit for the feature..." and See e.g. paragraph [0086] "In some parametric implementations, a design engineer may determine whether a feature or a part controls the parametric relationship between the two, alternatively this relationship may be predetermined.")

Regarding Claim 14:

Haller et al. disclose:

The computer program product of claim 12, wherein the configuration information includes connector affinity eligibility information, and wherein in determining the affinity of the connector object for the movant solid shape and the connector object for the target solid shape the program uses the connector affinity eligibility information to determine one or more connector objects of the target solid shape that are eligible for pairing with the connector object for the movant solid shape (See e.g. paragraph [0043] where "connector affinity eligibility information" is a descriptor attribute; and See e.g. paragraph [0044] "... parts are selected from the parts library by matching ... attributes ...")

Regarding Claim 15:

Haller et al. disclose:

The computer program product of claim 14, wherein the connector object includes a connector name field, and wherein the connector affinity eligibility information is derived from the name field (See e.g. Fig. 4 where 412 is an example of a name field / descriptor attribute.

See also paragraph [0044] "The automated connection mechanism is driven by descriptors." "The descriptor is … used to find and retrieve a standard part for which the feature was designed …")

Regarding Claim 16:

Haller et al. disclose:

The computer program product of claim 14, wherein when the program determines plural connector objects of the target solid shape can be paired with the connector object for the movant solid shape, (See e.g. Figs. 12a and 12b, and paragraph [0081]. See also paragraphs [0007]-[0009] e.g. "automatically position" e.g. "mate inferencing" e.g. "complimentary geometries are … found in the feature, such as a cylindrical hole.")

the program invokes a predetermined rule for choosing one of the plural connector objects of the target solid shape to be paired with the connector object for the movant shape (See e.g. paragraph [0048] "The automated connection mechanism may automatically select a fastener and populate …" e.g. paragraph [0051] "… mechanism determines the best companion part for the feature …" e.g. [0054] "… engineer maytivate a command that begins the process of locating features and populating those features …" e.g. [0055] "… without any intermediate intervention from the design engineer." e.g. [0056] "When more than one feature is to be populated, the assembly model is analyzed…" e.g. [0064]-[0066] "relational database lookup operations")

Regarding Claim 18:

Haller et al disclose:

The computer program product of claim 14, wherein the configuration information includes positional information; and wherein the program utilizes the positional information to determine how the target solid shape and the movant solid shape are to be oriented relative to one another at the physical locations associated with paired connector objects (See e.g. paragraph [0057] "... pattern of holes in such a way that a hole ... is concentric and coaxial ... common direction ... determine the alignment of the holes ...")

Regarding Claim 19:

Haller et al. disclose:

The computer program product of claim 12, wherein the configuration information includes geometry dependency information which enables the program to determine at least one physical parameter of one of the target solid shape and the movant solid shape (See e.g. paragraph [0057] "... pattern of holes in such a way that a hole ... is concentric and coaxial ... common direction ... determine the alignment of the holes ...")

Regarding Claim 20:

Haller et al. disclose:

The computer program product of claim 12, wherein the configuration information includes procurement information which enables the program to determine a procurement item for the movant solid shape (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 21:

Haller et al. disclose:

The computer program product of claim 20, wherein the procurement information indicates multiple candidate vendors for the movant solid shape; and wherein the program determines a preferred vendor for the movant solid shape (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 22:

Haller et al. disclose:

The computer program product of claim 21, wherein the program determines a preferred vendor for the movant solid shape based on predetermined criteria (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 23:

The computer program product of claim 20, wherein the procurement information indicates multiple candidate procurement items for the movant solid shape; and wherein the program determines a preferred procurement item for the movant solid shape (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 24:

Haller et al. disclose:

The computer program product of claim 12, wherein the program determines a preferred procurement item for the movant solid shape based on predetermined criteria.

Regarding Claim 25:

Haller et al. disclose:

The computer program product of claim 24, wherein the predetermined criteria is inventory or availability (See e.g. paragraph [0004] where a preferred procurement item is "existing inventory.")

Regarding Claim 26:

Haller et al. disclose:

The computer program product of claim 24, wherein the predetermined criteria is vendor (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 27:

Haller et al. disclose:

A three dimensional geometric modeling system comprising: a processor which executes a program comprising set of coded instructions stored in a memory; a display device upon which, when executed, the program provides a visual depiction of a three dimensional object comprising at least one solid shape, a user input device for inputting information to the processor (See e.g. paragraph [0036] and [0085];)

wherein, in response to communication via the user input device of insertion of a movant solid shape into a context including a target solid shape, the processor in executing the program configures the movant solid shape as having a particular attribute in accordance with an attribute

of the target solid shape (See e.g. paragraph [0081].)

Regarding Claim 28:

Haller et al. disclose:

The system of claim 27, wherein the program configures representative data of the movant solid shape as having a particular attribute in accordance with an attribute of the target solid shape (See e.g. paragraph [0081] where "...configuration in the part family..." is an "attribute" and See e.g. paragraph [0043] where "representative data" is a "descriptor attribute.")

Regarding Claim 29:

The system of claim 27, wherein the program configures the movant solid shape as having a particular size or dimension for compatibility with the target solid shape (See e.g. paragraph [0044] "The automated connection mechanism is driven by descriptors." e.g. "...parts are selected ... by matching ... attributes from feature ... with attributes of ... parts" e.g. paragraph [0051] "...mechanism reviews a list of valid lengths ... determines which length would provide the best fit...")

Regarding Claim 30:

Haller et al. disclose:

The system Of claim 27, wherein the program configures the movant solid shape as having a particular position relative to the target solid shape (See e.g. paragraph [0081] "...positioning procedure..." See also e.g. paragraph [0007] "...automatically position (i.e. locate ...) a part with respect to a feature.")

Regarding Claim 31:

Haller et al. disclose:

The system of claim 27, wherein the program configures the movant solid shape as having a particular physical orientation relative to the target solid shape (See e.g. paragraph [0081] "...align the part..." See also e.g. paragraph [0007] "...automatically position (i.e. ... align) a part with respect to a feature.")

Regarding Claim 32:

Haller et al. disclose:

A three dimensional geometric modeling system comprising: a processor which executes a program comprising set of coded instructions stored in a memory; a display device upon which, when executed, the program provides a visual depiction of a three dimensional object comprising at least one solid shape, a user input device for inputting information to the processor (See e.g. paragraph [0036] and [0085];)

wherein, in response to communication via the user input device of insertion of a movant solid shape into a context including a target solid shape, the processor in executing the program configures the movant solid shape as having a particular attribute in accordance with a predetermined rule (See e.g. paragraph [0081], See also paragraph [0086] "...alternatively, this relationship may be predetermined..." See also paragraph [0017] "...automatically generating a part or other model component ... model is retrieved based on compatibility ...")

Regarding Claim 33:

Haller et al. disclose:

The system of claim 32, wherein the program configures representative data of the movant solid shape as having a particular attribute in accordance with a predetermined rule (See e.g. paragraph [0081] where "...configuration in the part family..." is an "attribute" and See e.g.

paragraph [0043] where "representative data" is a "descriptor attribute.")

Regarding Claim 34:

Haller et al. disclose:

The system of claim 32, wherein the predetermined rule is used to configure the movant solid shape as a particular member of a class of solid shapes represented by a generic solid shape (See e.g. paragraph [0044] "...descriptor is later used to find and retrieve a standard part." where retrieval of a standard part is configuring the movant solid shape as a particular member (i.e. standard part) of a class of solid shapes (parts).)

Regarding Claim 35:

Haller et al. disclose:

The system of claim 32, wherein the program uses the predetermined rule to configure the movant solid shape as a preferred procurement item (See e.g. paragraph [0004] where a preferred procurement item is "existing inventory" or includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 36:

Haller et al. disclose:

The system of claim 35, wherein the program uses the predetermined rule to configure the movant solid shape as a preferred procurement item supplied by a preferred vendor (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 37:

Haller et al. disclose:

The system of claim 35, wherein the program uses the predetermined rule to configure the movant solid shape as a preferred procurement item in accordance with inventory or availability (See e.g. paragraph [0004] where a preferred procurement item is "existing inventory.")

Regarding Claim 38:

Haller et al. disclose:

A three dimensional geometric modeling system comprising: a processor which executes a program comprising set of coded instructions stored in a memory; a display device upon which, when executed, the program provides a visual depiction of a three dimensional object comprising at least one solid shape, a user input device for inputting information to the processor; wherein, in executing the program (See e.g. paragraphs [0036] and [0085],), the processor:

allocates a connector object for each of plural solid shapes, each connector object being conceptually associated with a physical location on the respective solid shape, the connector object including configuration information pertaining to how its solid shape is to be configured relative to another solid shape (See e.g. paragraph [0043] where "connector object" is a descriptor attribute;)

determines an affinity of a connector object of a movant solid shape and a connector object of a target solid shape(See e.g. paragraph [0081] "... mechanism determines ... best fit ...;")

in positioning and displaying the movant solid shape and the target solid shape relative to one another, configures one of the movant solid shape and the target solid shape in accordance with the configuration information of at least one of the respective connector objects(See e.g.

paragraph [0081] "...determines which configuration in the part family is the best fit for the feature..." and See e.g. paragraph [0086] "In some parametric implementations, a design engineer may determine whether a feature or a part controls the parametric relationship between the two, alternatively this relationship may be predetermined.")

Regarding Claim 39:

Haller et al. disclose:

The system of claim 38, wherein the program configures representative data of one of the movant solid shape and the target solid shape in accordance with the configuration information (See e.g. paragraph [0081] "...determines which configuration in the part family is the best fit for the feature..." and See e.g. paragraph [0086] "In some parametric implementations, a design engineer may determine whether a feature or a part controls the parametric relationship between the two, alternatively this relationship may be predetermined.")

Regarding Claim 40:

Haller et al. disclose:

The system of claim 38, wherein the configuration information includes connector affinity eligibility information, and wherein in determining the affinity of the connector object for the movant solid shape and the connector object for the target solid shape the program uses the connector affinity eligibility information to determine one or more connector objects of the target solid shape that are eligible for pairing with the connector object for the movant solid shape (See e.g. paragraph [0043] where "connector affinity eligibility information" is a descriptor attribute; and See e.g. paragraph [0044] "... parts are selected from the parts library by

matching ... attributes ...")

Regarding Claim 41:

Haller et al. disclose:

The system of claim 40, wherein the connector object includes a connector name field, and wherein the connector affinity eligibility information is derived from the name field (See e.g. Fig. 4 where 412 is an example of a name field / descriptor attribute. See also paragraph [0044] "The automated connection mechanism is driven by descriptors." "The descriptor is ... used to find and retrieve a standard part for which the feature was designed ...")

Regarding Claim 42:

Haller et al. disclose:

The system of claim 40, wherein when the program determines plural connector objects of the target solid shape can be paired with the connector object for the movant solid shape (See e.g. Figs. 12a and 12b, and paragraph [0081]. See also paragraphs [0007]-[0009] e.g. "automatically position" e.g. "mate inferencing" e.g. "complimentary geometries are ... found in the feature, such as a cylindrical hole.")

the program invokes a predetermined rule for choosing one of the plural connector objects of the target solid shape to be paired with the connector object for the movant shape (See e.g. paragraph [0048] "The automated connection mechanism may automatically select a fastener and populate ..." e.g. paragraph [0051] "... mechanism determines the best companion part for the feature ..." e.g. [0054] "... engineer maytivate a command that begins the process of locating features and populating those features ..." e.g. [0055] "... without any intermediate intervention from the design engineer." e.g. [0056] "When more than one feature is to be

populated, the assembly model is analyzed..." e.g. [0064]-[0066] "relational database lookup operations.")

Regarding Claim 44:

Haller et al. disclose:

The system of claim 40, wherein the configuration information includes positional information; and wherein the program utilizes the positional information to determine how the target solid shape and the movant solid shape are to be oriented relative to one another at the physical locations associated with paired connector objects (See e.g. paragraph [0057] "... pattern of holes in such a way that a hole ... is concentric and coaxial ... common direction ... determine the alignment of the holes ...")

Regarding Claim 45:

Haller et al. disclose:

The system of claim 38, wherein the configuration information includes geometry dependency information which enables the program to determine at least one physical parameter of one of the target solid shape and the movant solid shape The computer program product of claim 12, wherein the configuration information includes geometry dependency information which enables the program to determine at least one physical parameter of one of the target solid shape and the movant solid shape (See e.g. paragraph [0057] "... pattern of holes in such a way that a hole ... is concentric and coaxial ... common direction ... determine the alignment of the holes ...")

Regarding Claim 46:

Haller et al. disclose:

The system of claim 38, wherein the configuration information includes procurement information which enables the program to determine a procurement item for the movant solid shape (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 47:

Haller et al. disclose:

The system of claim 46, wherein the procurement information indicates multiple candidate vendors for the movant solid shape; and wherein the program determines a preferred vendor for the movant solid shape (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 48:

Haller et al. disclose:

The system of claim 46, wherein the program determines a preferred vendor for the movant solid shape based on predetermined criteria (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.").

Regarding Claim 49:

Haller et al. disclose:

The system of claim 46, wherein the procurement information indicates multiple candidate procurement items for the movant solid shape; and wherein the program determines a preferred procurement item for the movant solid shape (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to

purchase.")

Regarding Claim 50:

Haller et al. disclose:

The system of claim 38, wherein the program determines a preferred procurement item for the movant solid shape based on predetermined criteria (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Regarding Claim 51:

Haller et al. disclose:

The system of claim 50, wherein the predetermined criteria is inventory or availability (See e.g. paragraph [0004] where a preferred procurement item is "existing inventory.")

Regarding Claim 52:

Haller et al. disclose:

The system of claim 50, wherein the predetermined criteria is vendor (See e.g. paragraph [0004] where a preferred procurement item includes "only those parts that a corporation permits employees to purchase.")

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haller et al. (US Pub. No. 2002/0107673). as applied to claims 16 and 42 above, and further in view of Zuffante et al. (US Pat. No. 6,219,049.)

Regarding Claim 17:

Haller et al. disclose the computer program product of claim 16,

Haller et al. do not explicitly disclose:

The computer program product of claim 16, wherein the predetermined rule is to choose from the plural connector objects of the target solid shape, for pairing with the connector object for the movant shape, a connector object having an associated physical location which is nearest a physical drop location of the connector object of the movant solid shape as displayed on the display device.

However, Zuffante et al. disclose these features (See e.g. col 19 line 30 through col 20 line 63, especially col. 20 lines 1-2, lines 15-17, and lines 56-63.)

It would have been obvious to one skilled in the art at the time of invention to practice a predetermined rule to choose from the plural connector objects of the target solid shape based on physical location. It was known at the time of invention that this approach has the advantage of allowing the user to alternate between different mating scenarios and permits the user to mate the feature to the component in previewed geometry (See e.g. Abstract).

Regarding Claim 43:

Haller et al. disclose the system of claim 42,

Haller et al. do not explicitly disclose:

The system of claim 42, wherein the predetermined rule is to choose from the plural connector objects of the target solid shape, for pairing with the connector object for the movant shape, a connector object having an associated physical location which is nearest a physical drop location of the connector object of the movant solid shape as displayed on the display device.

However, Zuffante et al. disclose these features (See e.g. col 19 line 30 through col 20 line 63, especially col. 20 lines 1-2, lines 15-17, and lines 56-63.)

It would have been obvious to one skilled in the art at the time of invention to practice a predetermined rule to choose from the plural connector objects of the target solid shape based on physical location. It was known at the time of invention that this approach has the advantage of allowing the user to alternate between different mating scenarios and permits the user to mate the feature to the component in previewed geometry (See e.g. Abstract).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

5,371,845 A Newell et al. teach screen feedback techniques including cursor snapping and gravity;

5,619,630 Minami et al. teach 3-D CAD assembly;

6,016,147 Gantt, Brian D. teaches CAD involving origin and cling points, rotation and alignment of objects, and slide translation;

6,037,945 Loveland, James B. teaches a graphical method for modeling and estimating construction costs;

6,063,128 Bentley et al. teach object oriented computer modeling involving COM (Component Object Modeling) and persistent component objects;

6,434,441 B1 Beauchamp et al. teach parametric 3D modeling;

2005/0162419 A1 Kim et al. teach 3D virtual simulation for selection and purchase of customizable components.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward T. La Barr whose telephone number is (571) 270-3237. The examiner can normally be reached on Monday - Friday, 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao M. Wu can be reached on (571) 272-7761.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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